

ABSTRACT OF THE DISCLOSURE

Solid carrier-based microbial inoculants can be advantageously used for natural phosphorous supply of plant, biological control of soil born plant pathogens, biological degradation of organic contaminants, soil life and fertility improvement which solid carrier containing phosphorus, made of animal bone charcoal, and having grain size advantageously between 0.001 mm and 10 mm, pore size between 10 and 60,000 nanometer, macro porous structured, the specific area is between 1 and 500 m²/g, and the external and/or internal surface and/or internal pores are biologically active colonized with aerobic soil microorganisms under less than 30 degree Celsius temperature. Also described is a method for manufacturing and application of Nitrogen free solid carrier-based microbial inoculants which carrier is produced from animal bone by carbonisation process between 300 degree Celsius and 1000 degrees Celsius material core temperature in absence of oxygen, followed by cooling to below 50 degrees Celsius core temperature.